

WHAT IS CLAIMED IS:

- 1 Sub A3
1. An apparatus for discharging a sheet, said apparatus comprising:
2 a tray on which printed sheet is stacked;
3 a holder supporting said printed sheet above said tray; and
4 a moving means for horizontally moving said holder in a direction perpendicular to a sheet
5 discharging direction.
- 1 2. The apparatus as claimed in claim 1, further comprised of said moving means
2 comprising:
3 a rack reciprocating perpendicular to the sheet discharging direction; and
4 a driving means for driving said rack,
5 said holder moving above the tray in association with a movement of said rack.
- 1 3. The apparatus as claimed in claim 2, further comprised of said driving means
2 comprising;
3 a motor; and
4 a pinion connected to a shaft of said motor and engaged with said rack, said pinion receiving
5 a motion transferred from said motor and transferring said motion to said rack.
- 1 4. The apparatus as claimed in claim 2, further comprised of said driving means

2 comprising a carrier including an ink cartridge, said carrier reciprocating in the direction
3 perpendicular to the sheet discharging direction.

1 5. The apparatus as claimed in claim 3, further comprising a lever having a first end and
2 a second end, said first end connected to said holder, said second end connected to said rack, said
3 lever pivoting in association with the movement of said rack.

1 6. The apparatus as claimed in claim 5, further comprised of:
2 said holder having a slot; said slot being of an arc shape for guiding a movement of said
3 lever; and
4 said lever having a first gear and a protrusion, said first gear mounted at said second end and
5 engaged with the rack, said protrusion protruding from said first end to be inserted into said slot.

1 7. The apparatus as claimed in claim 6, further comprising means for elastically biasing
2 said lever to pivot in favor of the sheet discharging direction, said biasing means interposed between
3 said holder and said lever.

1 8. The apparatus as claimed in claim 7, wherein said biasing means is a spring.

1 9. An apparatus for discharging a sheet, said apparatus comprising:
2 a tray on which a printed sheet is stacked;

3 a pair of holders including a first holder and a second holder, said first and second holders
4 mounted respectively on both sides of said tray, said pair of holders holding said printed sheet above
5 said tray; and

6 a moving means for horizontally moving said first and second holders in a direction
7 perpendicular to a sheet discharging direction.

1 10. The apparatus as claimed in claim 9, further comprised of:

2 said moving means further comprising a rack reciprocating perpendicular to the sheet
3 discharging direction and a driving means for driving said rack; and

4 said first and second holders moving toward and away from each other in association with
5 a movement of said rack.

1 11. The apparatus as claimed in claim 10, further comprised of said driving means
2 comprising;

3 a motor; and

4 a pinion connected to a shaft of said motor and engaged with said rack, said pinion receiving
5 a motion transferred from said motor and transferring said motion to said rack.

1 12. The apparatus as claimed in claim 10, further comprised of said driving means
2 comprising a carrier including an ink cartridge, said carrier reciprocating in the direction
3 perpendicular to the sheet discharging direction.

1 13. The apparatus as claimed in claim 11, further comprising:
2 a first lever; and
3 a second lever, each of said first and said second levers having a first end and a second end,
4 each said first end connected to said first and said second holder respectively, each said second end
5 connected to said rack.

1 14. The apparatus as claimed in claim 13, further comprised of:
2 each of said first and said second holders having a slot, said slot being of an arc shape for
3 guiding a movement of said lever; and
4 each of said first and said second levers having a protrusion protruding from said first end
5 to be inserted into said slot.

1 15. The apparatus as claimed in claim 14, further comprising means for elastically biasing
2 said first and said second levers to pivot in favor of the sheet discharging direction, said biasing
3 means interposed between said first holder and said first lever and between said second holder and
4 second lever respectively.

1 16. The apparatus as claimed in claim 15, wherein said biasing means is a spring.

1 17. The apparatus as claimed in claim 16, further comprised of:

2 said first lever comprising a first gear mounted on the second end of said first lever and a
3 second gear engaged with said first gear and said rack; and

4 said second lever comprising a third gear, said third gear mounted on the second end of said
5 second lever and engaged with said rack,

6 so that said first lever pivots clockwise on a shaft of said first gear in association with the
7 movement of said rack and said second lever pivots counterclockwise on a shaft of said third gear
8 in association with the movement of said rack.

1 18. The apparatus as claimed in claim 17, further comprised of said rack having:

2 a first part having first gear teeth engaging with said second gear; and

3 a second part having second gear teeth engaging with said third gear,

4 a length of said first part is longer than a length of the second part, said second part
5 protruding in the paper discharging direction such that front ends of said first and second holders
6 correspond to each other.

1 19. The apparatus as claimed in claim 18, further comprising springs biasing said first
2 and said second levers to pivot in favor of the sheet discharging direction, said springs interposed
3 between said first holder and said first lever and between said second holder and second lever
4 respectively.

1 20. An apparatus for discharging a sheet of an ink-jet printer, said apparatus comprising:

2 a tray on which a printed sheet is stacked;

3 a pair of opposed and movable holders including a first holder and a second holder, each of
4 said first and second holders holding said printed sheet above said tray, said first and said second
5 holders mounted respectively on both sides of said tray;

6 moving means for moving said first and second holders according to a width of a printed
7 sheet in such a way that, to drop the printed sheet onto said tray, a distance between said first and
8 said second holders is wider than said width of the printed sheet and, to hold the printed sheet above
9 said tray, the distance between said first and second holders is narrower than the width of the printed
sheet; and

11 a pair of levers including a first lever and a second lever, each of said first and second levers
12 having a first end connected to said holder and a second end connected to said rack,

1 21. The apparatus as claimed in claim 20, wherein said holders within the ink-jet printer
2 and are not exposed to the outside of the ink-jet printer when the ink-jet printer is not operated.

1 22. The apparatus as claimed in claim 21, further comprised of:

2 each of said first and said second holders having a slot, said slot being of an arc shape for
3 guiding movements of said first and second levers;

4 said first lever comprising a first gear mounted on the second end of said first lever, a second
5 gear engaged with said first gear and said rack and a first protrusion protruding from the first end of
6 said first holder to be inserted into the slot of the first holder; and

7 said second lever comprising a third gear mounted on the second end of said second lever
8 and engaged with said rack, a second protrusion protruding from the first end of said first holder to
9 be inserted into the slot of the second holder,

10 so that said first lever pivots clockwise on a shaft of said first gear in association with the
11 movement of said rack and said second lever pivots counterclockwise on a shaft of said third gear
12 in association with the movement of said rack.